

IN THE CLAIMS:

Please cancel claim 9.

Please amend claims 1, 7 and 18 to read as follows, and add new claims 22-65:

A' 1. (amended) Apparatus for closing a wound comprising:
Sub 1 7 an elongated substrate comprising a biocompatible material, the elongated substrate having a first surface; and
a multiplicity of barbs projecting from the first surface, the multiplicity of barbs having tissue-penetrating distal ends,
wherein the multiplicity of barbs are cut from the substrate.

A2 Sub C3 7. (amended) The apparatus of claim 1 further comprising a therapeutic agent selected from a family of angiogenic growth factors.

A3 18. (amended) A method for performing an anastomosis comprising:
Sub 6 7 providing a device comprising an elongated tubular substrate of a biocompatible material having a surface and a multiplicity of barbs projecting from the first surface;
positioning the elongated tubular substrate within a vessel so that the multiplicity of barbs is directed towards an interior or exterior surface of the vessel; and

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squeezing the vessel against the multiplicity of barbs to adhere the interior or exterior surface of the vessel.

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22.(new) Apparatus for closing a wound comprising:

an elongated substrate comprising a biocompatible material, the elongated substrate having a first and a second surface, portions defining a plurality of perforations that extend from the first surface to the second surface; and

a multiplicity of barbs projecting from the first and second surfaces,

wherein the multiplicity of barbs have tissue-penetrating distal ends.

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23.(new) The apparatus of claim 22, wherein the plurality of perforations define suture eyelets.

24.(new) The apparatus of claim 22, wherein the elongated substrate further comprises a coating of a therapeutic agent.

25.(new) The apparatus of claim 22, wherein the elongated substrate is impregnated with a therapeutic agent.

26.(new) The apparatus of claim 22, wherein each one of the multiplicity of barbs includes a shank coupling the tissue-penetrating distal end to the substrate, and one or more projections from the shank.

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27.(new) The apparatus of claim 26, wherein the multiplicity of barbs are cut from the substrate.

28.(new) The apparatus of claim 22, wherein the elongated substrate has the form of a tube.

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29.(new) The apparatus of claim 28, wherein the tube includes an interior lumen formed by the first surface.

30.(new) The apparatus of claim 28, wherein the tube includes an exterior surface forming the first surface.

31.(new) The apparatus of claim 22 further comprising a stent-like structure, wherein the elongated substrate forms a side anastomosis site of the apparatus.

32.(new) The apparatus of claim 22, wherein the elongated substrate comprises a series of units interconnected by joints.

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33.(new) The apparatus of claim 22 further comprising a region of artificial cartilage coupled to the elongated substrate.

34.(new) The apparatus of claim 22 further comprising a replacement intervertebral disc coupled to the elongated substrate.

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Amended

35.(new) Apparatus for closing a wound comprising:

an elongated substrate comprising a biocompatible material, the elongated substrate having a first surface; and

a multiplicity of barbs projecting from the first surface, the multiplicity of barbs having tissue-penetrating distal ends,

wherein the elongated substrate has the form of a tube comprising an interior lumen formed by the first surface.

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36.(new) The apparatus of claim 35, wherein the elongated substrate further comprises a coating of a therapeutic agent.

37.(new) The apparatus of claim 35, wherein the elongated substrate is impregnated with a therapeutic agent.

38.(new) The apparatus of claim 35, wherein each one of the multiplicity of barbs includes a shank coupling the tissue-penetrating distal end to the substrate, and one or more projections from the shank.

39.(new) The apparatus of claim 38, wherein the multiplicity of barbs are cut from the substrate.

40.(new) The apparatus of claim 35 further comprising a stent-like structure, wherein the elongated substrate forms a side anastomosis site of the apparatus.

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41.(new) Apparatus for closing a wound
comprising:

an elongated substrate comprising a biocompatible material, the elongated substrate having a first surface;
and

a multiplicity of barbs projecting from the first surface, the multiplicity of barbs having tissue-penetrating distal ends,

wherein the elongated substrate has the form of a tube comprising an exterior surface formed by the first surface.

42.(new) The apparatus of claim 41, wherein the elongated substrate further comprises a coating of a therapeutic agent.

43.(new) The apparatus of claim 41, wherein the elongated substrate is impregnated with a therapeutic agent.

44.(new) The apparatus of claim 41, wherein each one of the multiplicity of barbs includes a shank coupling the tissue-penetrating distal end to the substrate, and one or more projections from the shank.

45.(new) The apparatus of claim 44, wherein the multiplicity of barbs are cut from the substrate.

46.(new) The apparatus of claim 41 further comprising a stent-like structure, wherein the elongated substrate forms a side anastomosis site of the apparatus.

A 4
Amended

47.(new) Apparatus for performing side anastomosis comprising:
a stent-like structure,
an elongated substrate comprising a biocompatible material, the elongated substrate having a first surface;
and
a multiplicity of barbs projecting from the first surface, the multiplicity of barbs having tissue-penetrating distal ends,
wherein the elongated substrate forms a side anastomosis site of the apparatus.

48.(new) The apparatus of claim 47, wherein the elongated substrate further comprises a coating of a therapeutic agent.

49.(new) The apparatus of claim 47, wherein the elongated substrate is impregnated with a therapeutic agent.

50.(new) The apparatus of claim 47, wherein each one of the multiplicity of barbs includes a shank coupling the tissue-penetrating distal end to the substrate, and one or more projections from the shank.

51.(new) The apparatus of claim 50, wherein the multiplicity of barbs are cut from the substrate.

52.(new) The apparatus of claim 47, wherein the elongated substrate has the form of a tube.

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53.(new) The apparatus of claim 52, wherein the tube includes an interior lumen formed by the first surface.

54.(new) The apparatus of claim 52, wherein the tube includes an exterior surface forming the first surface.

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55.(new) Apparatus for repairing cartilage comprising:
an elongated substrate comprising a biocompatible material, the elongated substrate having a first surface,
a multiplicity of barbs projecting from the first surface, the multiplicity of barbs having tissue-penetrating distal ends; and
a region of artificial cartilage coupled to the elongated substrate.

56.(new) The apparatus of claim 55, wherein the elongated substrate further comprises a coating of a therapeutic agent.

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57.(new) The apparatus of claim 55, wherein the elongated substrate is impregnated with a therapeutic agent.

58.(new) The apparatus of claim 55, wherein each one of the multiplicity of barbs includes a shank coupling the tissue-penetrating distal end to the substrate, and one or more projections from the shank.

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59.(new) The apparatus of claim 58, wherein the multiplicity of barbs are cut from the substrate.

60.(new) Apparatus for repairing an intervertebral disc comprising:

an elongated substrate comprising a biocompatible material, the elongated substrate having a first surface, a multiplicity of barbs projecting from the first surface, the multiplicity of barbs having tissue-penetrating distal ends; and

a replacement intervertebral disc coupled to the elongated substrate.

61.(new) The apparatus of claim 60, wherein the elongated substrate further comprises a coating of a therapeutic agent.

62.(new) The apparatus of claim 60, wherein the elongated substrate is impregnated with a therapeutic agent.

63.(new) The apparatus of claim 60, wherein each one of the multiplicity of barbs includes a shank coupling the tissue-penetrating distal end to the substrate, and one or more projections from the shank.

64.(new) The apparatus of claim 63, wherein the multiplicity of barbs are cut from the substrate.

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65.(new) The apparatus of claim 60 further comprising a region of artificial cartilage coupled to the elongated substrate.